Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A device for data communication between a first host device or a further host device and at least one client device on a shared transmission path having:

a first host device, which includes a host application;

at least one further host device, which includes a host application;

at least one client device, which includes a client application; and

a bus control module;

the host devices each having a master application interface module, which is linked in the transmission path;

the host devices each having a master application module which connects the particular host application to the assigned master application interface module;

each client device having a client application interface module, which is linked in the transmission path and is connected to the assigned client application;

the transmission path being implemented as a data bus representing a ring connector;

the respective master application interface module of each host device and the respective client application interface module of each client device being connected to one another by the data bus for exchanging data and/or signals with one another and

the bus control module being implemented to control the access of the host devices to the data bus, wherein

the bus control module is provided in the ring structure of the data bus and is connected to the respective master application interface module of each host device and the respective client application interface module of each client device by the data bus for exchanging data and/or signals with one another and

25   the bus control module is provided with a counter which counts the pulses

26   between the passage of two arbitration frames relayed on the data bus <u>and</u>

27   <u>the bus control module is provided with a comparator circuit which compares the</u>

28   <u>number of the elapsed pulses between the two arbitration frames against a predetermined target</u>

29   <u>number of said pulses and</u>

30   <u>when the number of said elapsed pulses exceeds said predetermined target</u>

31   <u>number, the bus control module transmits a new arbitration frame having a deactivated activity</u>

32   <u>bit in order to release the blocked data bus.</u>

1   2.   (Previously Presented) The device according to Claim 1, wherein the host

2   applications of the first and/or the further host devices have a processor.

1   3-6.   (Canceled)

1   7.   (Previously Presented) A method of data communication in a device for

2   data communication as claimed in Claim 1 between a first host device or a further host device

3   and at least one client device on a shared transmission path implemented as a data bus

4   representing a ring connection, having the following steps:

5   opening a communication connection between a host application running on the

6   host device and a client application running on the client device;

7   transmitting arbitration information on the data bus along the opened

8   communication connection, the arbitration information containing data, on the basis of which the

9   data bus is reserved for a predetermined time interval or for a predetermined data volume for a

10   subsequent data transmission on the data bus along the opened communication connection;

11   transmitting data and/or signals between the host application and the client

12   application and/or between the client application and the host application on the data bus along

13   the opened communication connection

14   wherein the passage of an arbitration frame containing the arbitration information

15   on the data bus is monitored by a bus control module in such a way that the pulses between two

16   passages of the arbitration frame are counted and

17   wherein a new arbitration frame having a deactivated activity bit is transmitted by

18   the bus control module when the number of counted pulses exceeds a predetermined value.

1   8.   (Previously Presented) The method according to Claim 7, wherein the

2   arbitration information is transmitted as an arbitration block, an arbitration block having

3   arbitration data which includes information about the length of the predetermined time interval

4   or about the extent of the predetermined data volume for the subsequent data transmission.

1   9.   (Previously Presented) The method according to Claim 8, wherein the

2   arbitration block has activity data which includes information about the current state of the

3   transmission path, from which it may be concluded whether the transmission path is currently

4   being used for data transmission.

1   10.   (Previously Presented) The method according to Claim 7, wherein in the

2   event of an access wish of a host application to the transmission path, the following steps are

3   performed:

4   the master application interface module assigned to the host application accepts

5   the arbitration block present on the transmission path,

6   reads out the activity data,

7   checks, on the basis of the activity data, whether the transmission path is currently

8   free for data transmission,

9   writes, if the transmission path is free, activity data in the arbitration block which

10   indicates use of the transmission path by the host application, and

11   transfers the arbitration block to the bus control module via the transmission path;

12   upon which the bus control module reserves the transmission path for the access

13   by the host application.

1   11.   (Previously Presented) The method according to Claim 10, wherein after

2   termination of a data transmission, the activity data in the arbitration block is reset by the master

3   application interface module and the transmission path is thus released again.

1   12.   (Previously Presented) A method of data communication in a device for

2   data communication as claimed in Claim 1 between a first host device or a further host device

3   and at least one client device on a shared transmission path implemented as a data bus

4   representing a ring connection, comprising:

5   opening a communication connection between a host application running on the

6   host device and a client application running on the client device;

7   transmitting arbitration information provided in an arbitration block on the data

8   bus along the opened communication connection, the arbitration information containing data, on

9   the basis of which the data bus is reserved for a predetermined time interval or for a

10   predetermined data volume for a subsequent data transmission on the data bus along the opened

11   communication connection;

12   transmitting data and/or signals between the host application and the client

13   application and/or between the client application and the host application on the data bus along

14   the opened communication connection;

15   wherein in the event of an access wish of a host application to the transmission

16   path, the following steps are performed:

17   the master application interface module assigned to the host application accepts

18   the arbitration block present on the transmission path,

19   reads out activity data from the arbitration block,

20   checks, on the basis of the activity data, whether the transmission path is currently

21   free for data transmission,

22   writes, if the transmission path is free, activity data in the arbitration block which

23   indicates use of the transmission path by the host application, and

24   transfers the arbitration block to the bus control module via the transmission path;

25   upon which the bus control module reserves the transmission path for the access

26   by the host application and

27   wherein the passage of an arbitration frame containing the arbitration information

28   on the data bus is monitored by a bus control module in such a way that the pulses between two

29   passages of the arbitration frame are counted and

30   wherein a new arbitration frame having a deactivated activity bit is transmitted by

31   the bus control module when the number of counted pulses exceeds a predetermined value.

1   13.   (Previously Presented) A device for data communication between a first

2   host device or a further host device and at least one client device on a shared transmission path

3   having:

4   a first host device, which includes a host application;

5   at least one further host device, which includes a host application;

6   at least one client device, which includes a client application; and

7   a bus control module;

8   the host devices each having a master application interface module, which is

9   linked in the transmission path;

10   the host devices each having a master application module which connects the

11   particular host application to the assigned master application interface module;

12   each client device having a client application interface module, which is linked in

13   the transmission path and is connected to the assigned client application;

14   the transmission path being implemented as a data bus representing a ring

15   connector;

16   the respective master application interface module of each host device and the

17   respective client application interface module of each client device being connected to one

18   another by the data bus for exchanging data and/or signals with one another and

19   the bus control module being implemented to control the access of the host

20   devices to the data bus, wherein

21   the bus control module is provided in the ring structure of the data bus and is

22   connected to the respective master application interface module of each host device and the

23   respective client application interface module of each client device by the data bus for

24   exchanging data and/or signals with one another and

25   the bus control module is provided with a counter which counts the pulses

26   between the passage of two arbitration frames relayed on the data bus and

27   wherein in the case of a blocked data bus the bus control module transmits a new

28   arbitration frame having a deactivated activity bit in order to release the blocked data bus.

29